

**TECHNICAL REVIEW DOCUMENT**  
**For**  
**RENEWAL of OPERATING PERMIT 95OPPB088**

CF&I Steel, LP dba Rocky Mountain Steel Mills – Rod/Bar Mill  
Pueblo County  
Source ID 1010048

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**I. Purpose:**

This document will establish the basis for decisions made regarding the applicable requirements, emission factors, monitoring plan and compliance status of emission units covered by the renewed operating permit proposed for this site. The original Operating Permit was issued October 1, 1998. The previous renewal Operating Permit was issued on May 1, 2004, and expired on May 1, 2009. This document is designed for reference during the review of the proposed permit by the EPA, the public, and other interested parties. The conclusions made in this report are based on information provided in the renewal application submitted March 21, 2008, and additional technical information submitted, previous inspection reports and various e-mail correspondence, as well as telephone conversations with the applicant. Please note that copies of the Technical Review Document (TRD) for the original permit and any Technical Review Documents associated with subsequent modifications of the original Operating Permit may be found in the Division files as well as on the Division website at <http://www.cdphe.state.co.us/ap/Titlev.html>.

Any revisions made to the underlying construction permits associated with this facility made in conjunction with the processing of this operating permit application have been reviewed in accordance with the requirements of Regulation No. 3, Part B, Construction Permits, and have been found to meet all applicable substantive and procedural requirements. This operating permit incorporates and shall be considered to be a combined construction/operating permit for any such revision, and the permittee shall be allowed to operate under the revised conditions upon issuance of this operating permit without applying for a revision to this permit or for an additional or revised construction permit.

**II. Description of Source**

The entire facility at this site is a steel manufacturing plant. The sources addressed in this operating permit are those related to the portion of the plant dedicated to the production of steel rods and bars. Briefly, these products are produced by passing the billets through a heating furnace to raise the steel temperature. Billets can be banded or marked with paint to color code them.

The hot billets are passed through a series of rollers to shape the desired final product. Coil rebar shapes are sent to pouring reels for forming into final product. Straight rebar passes to cooling beds, and is bundled for shipment.

Lubricant can be used in the rolling process and paints are used to color code billets and products. Both of these activities are insignificant activities due to exempt emissions.

The facility is located adjacent to Interstate 25 on the south side of Pueblo, Colorado at 2100 South Freeway. The area in which the plant operates is designated as attainment for all criteria pollutants.

There are no affected states within 50 miles of the plant. The Great Sand Dunes National Monument is a Federal Class I designated area within 100 kilometers of the facility. Florissant Fossil Beds National Monument is a Federal land area within 100 kilometers of the facility. Florissant Fossil Beds National Monument has been designated by the State to have the same sulfur dioxide increment as a Federal Class I area.

## Emissions

The summary of emissions that was presented in the Technical Review Document (TRD) for the original permit issuance has been modified to update the potential to emit based on revisions to permitted emission limits, and to update actual emissions.

ROD/BAR MILL POTENTIAL TO EMIT (PTE)								
Equipment	AIRS ID	PM	PM <sub>10</sub>	NO <sub>x</sub>	CO	SO <sub>2</sub>	VOC	HAPs
ITAM Billet Reheat furnace	107	3.29	3.29	30.28	36.33	0.26	2.38	0.81
Paint use	N/A						< 2.0	

ROD/BAR MILL ACTUAL EMISSIONS (as reported on most recent APEN)								
Equipment	AIRS ID	PM	PM <sub>10</sub>	NO <sub>x</sub>	CO	SO <sub>2</sub>	VOC	HAPs
ITAM Billet Reheat furnace	107	3.29	3.29	30.28	36.33	0.26	2.38	0

FACILITY-WIDE PTE*								
Equipment	AIRS ID	PM	PM <sub>10</sub>	NO <sub>x</sub>	CO	SO <sub>2</sub>	VOC	HAPs
All permitted equipment	-	242.1	193.5	531.4	1540.2	170.2	179.3	18.5

\* facility-wide PTE includes emissions for all permitted equipment. This does not include emissions from insignificant activities.

## **NESHAP Applicability**

### **Subpart XXXXXX– National Emissions Standards for Hazardous Air Pollutants: Area Source Standards for Nine Metal Fabrication and Finishing Source Categories:**

The rule establishes emission standards in the form of management practices and equipment standards for control of HAPs for nine metal fabrication and finishing area sources.

RMSM reviewed the rule and has determined that they are not subject to this subpart. They do not fall under any of the 9 metal fabrication and finishing categories and the NAICS code does not match any of the NAICS codes identified in the rule (Table 1 of the Federal Register preamble – Regulated Categories and Entities Potentially Affected). In addition, the rule mentions that the primary activity at the facility must be one of the listed 9 source categories. The primary activity at RMSM is to produce steel billets from scrap utilizing the Electric Arc Furnace. The Division agrees that this rule does not apply.

### **Subpart HHHHHH – National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources.**

RMSM reviewed this rule to determine applicability. The Rail Mill does perform paint stripping operations (rail finishing to remove quality markings), but none of the liquids contain Methylene Chloride. RMSM also coats miscellaneous parts, but none of the coatings contain the 5 target HAPs (Cr, Pb, Mn, Ni, Cd). The Division agrees that RMSM is not subject to this rule at this time. Should RMSM start using Methylene Chloride for stripping, or use coatings with any of the 5 target HAPs, this rule would likely apply.

### **Subpart MMMM – National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products.**

This rule is intended to reduce HAP emissions from surface coating onto metal parts/products. It only applies to operations at Major sources of HAPs. It would likely apply to RMSM should they be classified as Major HAPs in the future.

### **Subpart FFFFF – National Emission Standards for Hazardous Air Pollutants: Integrated Iron and Steel Manufacturing.**

The rule only applies to sinter plants, blast furnaces, and basic oxygen process furnace shops. None of these are located at RMSM.

### **Subpart ZZZZZ – National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries Area Sources.**

The rule applies to facilities that pour molten metal into molds to produce final or near final shape products for introduction into commerce. The electric arc furnace at RMSM is subject to Subpart YYYYYY (see below). The definition of EAF steelmaking facility in Subpart YYYYYY excludes EAF steelmaking facilities at steel foundries. Thus, it does not appear that RMSM is subject to Subpart ZZZZZ.

**Subpart YYYYYY – National Emission Standards for Hazardous Air Pollutants for Area Sources: Electric Arc Furnace Steelmaking Facilities.**

This rule establishes requirements for the control of mercury emissions by requiring purchase of motor vehicle scrap from providers that participate in an EPA-approved program for the removal of mercury switches. RMSM is subject to this rule, but it does not impact operations at the Rod/Bar Mill. This rule will not be listed in the Rod/Bar Mill permit. It will be listed in the other Operating Permit(s) that cover the EAF and scrap operations.

**NSPS Applicability**

**Subpart D - Standards of Performance for Fossil-Fuel-Fired Steam Generators**

The Subpart D standards only apply to units that produce steam. This is not applicable to the Rod/Bar Mill furnace.

**Compliance Assurance Monitoring (CAM) Applicability**

RMSM is not required to obtain a CAM plan for the Rod/Bar Mill operations since no emission points at the Rod/Bar Mill use a control device to achieve compliance with an emission limitation or standard to which they are subject and have pre-control emissions that exceed or are equivalent to the major source threshold.

**Green House Gas Requirements**

In 2009 and 2010, EPA issued two rules related to Greenhouse Gasses (GHG) that may affect your facility.

On October 30, 2009, EPA published a rule for the mandatory annual reporting of GHG emissions to EPA from large GHG emissions sources in 40 CFR part 98. You may be required to identify GHG emissions in future Title V permit applications. Such identification may be satisfied by including some or all of the information reported to EPA to meet the GHG reporting requirements.

On May 13, 2010, EPA issued a final rule that sets thresholds for GHG emissions that define when permits under the New Source Review Prevention of Significant Deterioration (PSD) and Title V Operating Permit programs are required for new and existing industrial facilities. Future new construction and/or modifications at your facility may be subject to PSD review for GHG emissions.

### **III. Discussion of Modifications Made**

#### **Source Requested Modifications**

A number of modifications were made to the permit as requested by RMSM. Modification requests will be summarized under the appropriate emission source (or permit location) listed below:

##### Cover page

The facility name was updated.

##### Page following cover page

The facility contact person was updated. The responsible official was updated.

##### Section I – General Activities & Summary

No changes requested.

##### Section II – Specific Permit Terms

###### AIRS ID 087 – Paint Identification of billets, bars & rods

RMSM requested to remove this emission unit from the permit. RMSM review of this activity indicate that emissions are insignificant. An APEN cancellation request form was also submitted for this point. The Division has removed this activity from the permit conditions and has listed it as an insignificant activity as requested by RMSM.

###### AIRS ID 107 – ITAM Billet Reheat Furnace

RMSM requested to modify the NO<sub>x</sub> emission factor on the furnace to 0.07 lb/MMBtu, and modify the NO<sub>x</sub> emission limit to 30.28 ton/year. This is requested as required by the Federal Consent Decree (CD) Civil Action 03-M-0608. This request appeared in an application submitted April 9, 2007.

The renewal application (submitted March 21, 2008) requests a NO<sub>x</sub> emission factor of 70 lb/MMscf, which would be equivalent to 0.07 lb/MMBtu using natural gas with a heat content of 1000 Btu/scf. Since NO<sub>x</sub> emissions are tracked based on results from source testing, the Division is not listing a compliance emission factor in the permit. However – the 0.07 lb/MMBtu emission limit from the

Federal CD must be included in the permit. The Division is not authorized to change this limit from how it is listed in the Federal CD. RMSM would need to modify the Federal CD through EPA to change the units to lb/MMscf.

The original Federal CD required RMSM to install ultra-low NO<sub>x</sub> burners and/or make other modifications to achieve the NO<sub>x</sub> limit of 0.07 lb/MMBtu on the Rod/Bar Mill furnace. RMSM did install ultra-low NO<sub>x</sub> burners in the Rod/Bar Mill furnace in order to comply with the Federal CD. The Division has inserted the NO<sub>x</sub> emission limit from the Federal CD into the Title V Operating Permit. The Federal CD (paragraph 56) also outlines various Rod/Bar Mill requirements to be completed by certain dates (e.g. complete engineering design, submit plans to EPA). None of the other requirements of paragraph 56 from the Federal CD have been included since the Division considers them fulfilled and not on-going requirements.

The Federal CD also requires (via paragraph 60) RMSM to incorporate the parametric monitoring requirements into the Title V permit as enforceable requirements. The Division has included the current parametric monitoring requirements into the permit. Currently, the requirements include:

- Natural Gas Input: see Condition 1.3.
- Periodic portable testing.

ERMS objected to the use of portable testing to monitor compliance with the NO<sub>x</sub> limitations. ERMS stated that the portable monitoring protocols would be difficult to meet. The Division discussed this issue with ERMS and the EPA, and it was agreed to require compliance monitoring via annual stack testing. Reduced testing frequency is allowed if measured rates are below 75% of the permit limit. See permit condition 1.4 for the testing details.

Language in this condition has been updated to the current standard language. Changes include:

- Emission limits updated.
- Federal CD NO<sub>x</sub> limitation included (0.07 lb/MMBtu), including periodic testing.
- All requirements reorganized and rearranged.

In addition, the Division has included facility-wide emission limits for Hazardous Air Pollutants (HAPs). RMSM wishes to be considered a synthetic minor source for HAPs and these limits are necessary. RMSM has submitted a facility-wide HAP inventory to prove that they are synthetic minor for HAPs.

#### Appendix A

The list of insignificant activities has been updated as requested.

### **Other Modifications**

In addition to the modifications requested by the source, the Division has included changes to make the permit more consistent with recently issued permits, include comments made by EPA on other Operating Permits, as well as correct errors or omissions identified during inspections and/or discrepancies identified during review of this renewal. These changes are as follows:

#### **Section I – General Activities and Summary**

- The order of the conditions in this section has been rearranged to match recently issued Operating Permits.
- Condition 1.3 has been drafted to include references to the requirements contained in the Federal Consent Decree (Civil Action No. 03-M-0608), and State of Colorado Compliance Order on Consent 0005-03.
- In Condition 1.4, General Condition 3.d & 3.g. was added as a State-only requirement.
- Condition 3.1 was drafted to reflect the current status of RMSM with respect to PSD.

#### **Section II – Specific Permit Terms**

- The previous statement regarding emission factors has been removed. This is not standard language.
- The Division included the applicable requirements from the State of Colorado's Compliance Order on Consent, 0005-03. This requires RMSM to update paint MSDS on a quarterly basis. RMSM requested that updated MSDS that indicate an increase in VOC/HAP be applied to the most recent previous year, instead of previous quarter as the COC required. Since this is more conservative, the Division has made this requested change in the permit.
- The requirement to inspect and review insignificant activities has been removed from the permit. RMSM should maintain records of the insignificant activities and know the emissions from them. However, the Division does not typically require a formal annual inspection and review.

#### **Section III – Permit Shield**

- The reference to the permit shield has been updated.

#### **Section IV – General Permit Conditions**

- The Affirmative Defense Provision for Excess Emissions during Malfunctions language was added to condition 3.d.
- Condition 5 & 21: Replace “upset” with “malfunction”
- The definition of “prompt” has changed and Condition 21 has been updated with the new definition.
- Minor language changes to Condition 22.d have been incorporated.

#### Appendix B & C

- This language has been updated to reflect current standard language.
- The Appendix C requirement to document if the Data was continuous has been removed.

#### Appendix D

- The address of EPA has been updated.

#### Appendix F

- Cleared of past modifications.